

REMARKS

This application has been carefully reviewed in light of the Office Action dated August 21, 2003. Claims 1-4 and 6-16 remain pending in this application. Claims 1 and 13-16 are the independent claims.

On the merits, the Office Action rejected Claims 1-4 and 6-16 for the reasons of record listed in Paper No. 15. Applicant respectfully submits that the claims are allowable for at least the following reasons:

Applicant's Claim 1 recites: "A data storage system comprising a set of structures including: a first structure of layers including at least a first ferromagnetic layer and a second ferromagnetic layer with at least a separation layer of a non-magnetic material therebetween, said first structure having at least a magneto resistance effect; a second structure including at least one magnetic layer, said second structure influencing at least one intrinsic magnetic characteristic of said first structure; and said second structure being separated from said first structure by at least a layer of a high-resistive metallic material and said layer of a high-resistive metallic material furthermore coupling the influencing of said second structure on said first structure while not substantially influencing the magnitude of the magneto

resistance effect of said first structure and is less than 5 nm thick."

Lin '053, and Lin '475 recite a layer 408 formed of Ta with a thickness of 5 nm. Both Lin references fail to recite or suggest the limitation that the metal layer is less than 5 nm. Claim 1 is believed patentable over Lin for at least this reason.

In addition, the Office Action argues that the structure of Lin '475 has a spacer layer that causes a mainly ferromagnetic coupling of the second structure on the first structure while not substantially influencing the magnitude of the magnetoresistance effect of the first structure which inherently exists due to Lin's structure. Applicant respectfully notes that a missing element is inherently present in a reference only if that element necessarily follows from what has been expressly described, and would be so recognized by one of skill in the art (as opposed to the examiner's expectation). Mere possibilities or even probabilities are not enough; necessity recognized by those of skill in the art is required.<sup>1</sup> The M.P.E.P. echoes this case law.

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<sup>1</sup> The Federal Circuit has clearly set out the standard for inherency in, e.g., Continental Can Co. v. Monsanto Co., 20 U.S.P.Q.2d 1746, 1749 (Fed. Cir. 1991)(emphasis added):

To serve as an anticipation when the reference is silent about the asserted inherent characteristic, such gap in the reference may be filled with recourse to extrinsic evidence. Such evidence must make clear that the missing descriptive matter is necessarily present in the thing described in the reference and that it would be so recognized by persons of ordinary skill. In re Oelrich, 212 U.S.P.Q. 323, 326 (C.C.P.A. 1981) (quoting Hansgirk v. Kemmer, 40 U.S.P.Q. 665, 667 (C.C.P.A. 1939)) provides: "Inherency, however may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient."

This citation is also set out in M.P.E.P. § 2131.01(d).

The fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic.

M.P.E.P. § 2112 (emphasis in original) (citations omitted).

Further, the following is also emphasized:

In relying upon the theory or inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teaching of the applied prior art.

M.P.E.P. § 2112 (emphasis in original) (citations omitted).

It is well established that a recited element or step is inherently present in a prior art reference only if that element is necessarily present or necessarily performed in that reference, and further that its presence or performance would be recognized by one of ordinary skill in the art from what has been expressly described. Second, the Office Action must provide objective evidence or cogent technical reasoning to support a contention of inherency.<sup>2</sup>

Lin's recitation that layer 408 is provides magnetic isolation of the keeper layer from the free layer indicates that the reference actually would teach one of ordinary skill in the art to keep the magnetic effect in these layers separate. Thus one of ordinary skill in the art would have failed to recognize the

<sup>2</sup> "In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art." *Ex Parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inrer. 1990).

advantages of having Applicant's structure. Contrary to the Office Action's argument that the structure of Lin inherently requires that the two structures influence each other, the selected thickness of the metal layer has novel and non-obvious advantages which one of ordinary skill in the art at the time of the invention would not have recognized. Thus, Claim 1 is believed patentable over Lin for at least these reasons.

Claims 13-16 recite systems and methods substantially corresponding to Claim 1 and are believed patentable for at least the same reasons. In addition, Applicant respectfully believes the rejection of Claim 16 over Lin '053 should be withdrawn because Lin '053 fails to recite or suggest the metal layer being less than 5 nm thick.

Claims 2-4 and 6-12 depend from one or another of the independent claims discussed above and are believed patentable for at least the same reasons. In addition, Applicant respectfully believes Claims 2-4 and 6-12 to be independently patentable and request separate consideration of each claim. Applicant respectfully believes the § 103 rejections of Claims 9-12 to be moot in light of the above remarks and requests their withdrawal.

In view of the foregoing remarks, Applicant respectfully requests favorable reconsideration and early passage to issue of the present application.

Applicant's undersigned agent may be reached by telephone at the number given below.

Respectfully submitted,

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